Notice of Allowability	Application No. 09/336,126	Applicant(s) REN ET AL.	
	Examiner Michael C. Miggins	Art Unit 1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *09012004*.

2. ☒ The allowed claim(s) is/are *37,78 and 87-108*.

3. ☒ The drawings filed on *06/18/1999* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 11051999, 08232001
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *09172004* .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Michael C. Miggins
Examiner
Art Unit: 1772

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Edwin Merkel on 9/17/2004.

The application has been amended as follows:

In the claims:

In claim 37, line 2, after "a substrate" and before "a strain point" the term "having" has been deleted and the phrase - - having an outer surface and - - has been inserted in place thereof.

In claim 37, line 4, after "one or more" and before "carbon nanotubes" the phrase - - plasma-enhanced chemical vapor deposited graphitized - - has been inserted.

In claim 37, line 5, after "from" and before "outer surface" the term "an" has been deleted the term - - the - - has been inserted in place thereof.

In claim 78, line 3, after "free-standing" and before "graphitized carbon nanotubes" the phrase - - plasma-enhanced chemical vapor deposited - - has been inserted.

In claim 78, line 6, after "phosphor coating" the phrase - - wherein the substrate has a strain or a melting point temperature between about 300 and 700 ^{o}C - - has been inserted.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

With regards to claim 37, the prior art does not teach or suggest applicant's recited product comprising a substrate having an outer surface and a strain point or a melting point temperature between about 300 and 700 degrees C and one or more plasma-enhanced chemical vapor deposited graphitized carbon nanotubes formed on and extending outwardly from the outer surface of the substrate.

Ajayan et al. disclose carbon nanotubes on a glass substrate to form an array (column 12, lines 30-67). However, the array is subjected to heat treatments of 1350 and 1600 degrees C and therefore the glass substrate can not have a strain point or a melting point temperature between about 300 and 700 degrees C as claimed by applicant. Furthermore, Ajayan et al. do not teach one or more plasma-enhanced chemical vapor deposited graphitized carbon nanotubes.

Li et al. (Large-Scale Synthesis of Aligned Carbon Nanotubes, Science, Vol. 274, 12/6/1996, provided in applicant's IDS of 9/20/99) disclose graphitized carbon nanotubes obtained from decomposition of acetylene at 700 degrees on a mesoporous Silica. However, the nanotubes are said to grow continuously from

the bottom to the top of the films. Thus Li et al. do not teach carbon nanotubes formed on and extending outwardly from the outer surface of the substrate. Li et al. do not teach one or more plasma-enhanced chemical vapor deposited graphitized carbon nanotubes.

Yudasaka et al. (Appl. Phys. Lett 70(14), 4/7/1997, provided by applicant in the IDS of 9/20/99) disclose the formation of Carbon nanotubes in the presence of Ni particles at 600 degrees C. However, the nanotubes of Yudasaka et al. are not formed on a substrate at all. Furthermore, Yudasaka et al. do not teach plasma-enhanced chemical vapor deposited graphitized carbon nanotubes.

With regards to claim 78, the prior art does not teach applicant's recited field emission display comprising a baseplate comprising a substrate and one or more free-standing plasma-enhanced chemical vapor deposited graphitized carbon nanotubes originating and extending outwardly from an outer surface of the substrate, wherein the substrate has a strain point or a melting point temperature between about 300 and 700 degrees C.

Debe discloses a field emission display comprising a baseplate comprising a substrate and one or more nanotubes. However, Debe does not teach plasma-enhanced chemical vapor deposited graphatized carbon nanotubes, wherein the substrate has a strain point or a melting point temperature between about 300 and 700 degrees C.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

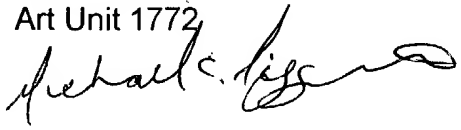
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Miggins whose telephone number is (571) 272-1494. The examiner can normally be reached on Monday-Friday; 1:30-10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pyon Harold can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Miggins
Examiner
Art Unit 1772



MCM
September 17, 2004